On Violating One’s Own Privacy: $N$-adic Utterances and Inadvertent Disclosures in Online Venues

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Abstract:

Purpose:
To understand the phenomena of people revealing regrettable information on the Internet, we examine who people think they’re addressing, and what they say, in the process of interacting with those not physically or temporally co-present.

Design/methodology/approach:
We conduct qualitative analyses of interviews with student bloggers and observations of five years’ worth of their blog posts, drawing on linguists’ concepts of indexical ground and deictics. Based on analyses of how bloggers reference their shared indexical ground and how they use deictics, we expose bloggers’ evolving awareness of their audiences, and the relationship between this awareness and their disclosures.

Findings:
Over time, writers and their regular audience, or “chorus,” reciprocally reveal personal information. However, since not all audience members reveal themselves in this venue, writers’ disclosures are available to those observers they are not aware of. Thus, their over-disclosure is tied to what we call the “n-adic” organization of online interaction. Specifically, and as can be seen in their linguistic cues, N-adic utterances are directed towards a non-unified audience whose invisibility makes the discloser unable to find out the exact number of participants or the time they enter or exit the interaction.

Research implications:
Attention to linguistic cues, such as deictics, is a compelling way to identify the shifting reference groups of ethnographic subjects interacting with physically or temporally distant others.

Originality/value:
We describe the social organization of interaction with undetectable others. N-adic interactions likely also happen in other on- and offline venues in which participants are obscured but can contribute anonymously.

Keywords: privacy, online disclosure, interaction, audiences, blog, Internet, social organization/structure of interaction
Introduction

Interaction online poses a new version of a classic sociological problem: that of understanding the social organization of influences that are simultaneously local and distant. One example of this problem of disentangling geographically and temporally distant influences – an issue especially salient for ethnographers – is a phenomenon that is well-documented but poorly understood: the experience of what is known informally as “overdisclosure.”\(^1\) Specifically, we know that people often write about life’s most sensitive subjects online, and both participants in and observers of online interactions are keenly aware of the risks of sharing personal information in such a public venue. Inevitably, perhaps, those who overdisclose are often surprised – and sometimes, ashamed – when they ultimately find their audience is so vast. Why, then, do people violate their own privacy?

The interactional organization of this specific phenomenon has not been conceptualized by classical theorists of interaction and the self, concerned as they were with face-to-face interaction among those aware of those they addressed, and with the ways individuals make ongoing adjustments towards the self they seek to present to significant others (Cooley 1922; Mead 1934). Turning to the present, scholars of media have shown that social media poses a problem in that significant others from various networks are all together in one place, a phenomenon that has been called “context collapse” (Vitak 2012, Davis and Jurgenson 2014). Recognizing this, scholars have interviewed social media users to find out how they deal with this diffuse audience, and

\(^1\) Work documenting this phenomenon includes Qian and Scott, 2007; Lewis et al., 2008; Debatin et al., 2009; Waters and Ackerman, 2011.
find that they have a repertoire of strategies such as using multiple accounts, deleting peers’ posts, or formulating ingroup language so only peers will understand the meaning they assign to a message (Marwick and boyd 2011, 2014). This work has been valuable for understanding how users of social media sites navigate networks rooted in their family and work communities usually separated from each other, as well as the privacy-enhancing attempts that are used in these venues. Primarily involving interviews and surveys, it also has taken the study of social media down important new paths, revealing the new challenges for scholars who usually engage classical theorists’ ideas with strategies used to study offline venues.

But if we want to understand the interactional dynamics that lead to disclosures, we need to explore how social media users think about and reorient towards their various reference groups in an ongoing way. In face-to-face interaction, recognizing the identity of one’s audiences comes about naturally when situations shift. But a key problem in transposing researchers’ traditional understanding of interaction to online venues is that audiences are often undetectable. For researchers to conceptualize how online users respond to their “imagined audience” (Marwick and boyd 2011; Litt 2012), it is important to identify the degree the user is aware of her audience. To account for online users’ awareness of periodically undetectable audiences, we need new ways of conceptualizing the social organization of interaction in this venue.

Focusing on linguistic cues embedded in these exchanges, we argue that over-disclosure is tied to what we call the “$n$-adic” organization of online interaction.\(^2\)

\(^2\) Beyond the specific number of audience members, there are many other aspects that the blogger does not know about the other participants, such as their identity, social group, the immediate context they were in
N-adic utterances are directed towards a non-unified audience whose invisibility makes
the discloser unable to find out the exact number of participants or the time they enter or
exit the interaction. While in this paper we focus solely on the exchange between
bloggers and their audiences, who face a new medium but an old problem (Horton and
Wohl 1956; Horton and Strauss 1957), n-adic interactions also happen in other venues in
which participants are not visible to each other but can contribute anonymously (e.g., talk
among truck drivers over CB radios). ³ In online interactions, conversations might be
dyadic, triadic, or involve even more participants, but those participants’ awareness of the
structure of the interaction shifts over time, as can be shown through analyzing how they
use language. The sociologically compelling feature is that these are n-adic interactions
for some number n, which the speaker can only determine when the whole chain
finishes. ⁴

To analyze how participants’ perceptions of the social structure of online exchanges
influence the content of these interactions, we draw from two waves of interviews
collected across five years (from 2004-2009), and, with an eye towards the patterns of
deictic use in language, ethnographically analyzed blog posts produced by these college
during the interaction, etc. We define the group in numeric terms because of the long-documented effect of
the number of interactants upon the creation of a distinct social relationship (Simmel 1971).

³ As ten years in the evolution of the Internet is a full epoch, we are aware that the word “blog” might have
changed meaning since this research began in the mid-2000s. The blogs we studied refer to the online
services that started in late 1990s and became popular in early 2000s. The representative blog sites are
xanga.com, livejournal.com, myspace.com, etc. Although the companies behind these sites have now
disappeared, most important to our argument is the form of interaction they host, forms that are ubiquitous
online.

⁴ The number n is only the number of participants who actually took part in the interactional chains and
does not include non-interacting observers. The number of actual audience members is in most cases never
revealed.
students over the same period. We identify how bloggers ultimately modify the technological features of the blog to seek to control access to their disclosures in its n-adic space, for instance, by blocking certain users from having the ability to observe posts. Through engaging linguists’ concepts of indexical ground and deictics to analyze these blog posts, we are also able to examine how those perceived structures create unique forms of interdiscursivity in speech, ultimately allowing us to contribute to the tradition of pragmatics in the field of linguistics.

**Blog interaction, multiple audiences, and language**

Studies of interaction suggest that intersubjectivity, or, a co-conception or coorientation to the world (Schegloff 1992), should be as attainable in blogging exchanges as in other forms of online interaction (cf. Robinson 2007, Menchik and Tian 2008, Campos-Castillo and Hitlin 2013). However, the one-to-many structure of the venue presents unique challenges for bloggers of interacting with others whose identity or presence they cannot detect. Understanding the social organization of this particular interactional form requires new conceptual tools.

In blogging interaction, participants face challenges in achieving intersubjectivity because their audiences are diverse and often undetectable. Scholarship on social media has made clear the problem interactants confront; like many other one-to-many forms that underpin online exchanges, blogging interaction usually involves observers who are not taken into account when an utterance is initially composed, a circumstance referred to as “context collapse” (boyd 2008; Hogan 2010; Vitak 2012; Davis and Jurgenson 2014).
Further, to the blogger, audiences are masked—and thus bloggers are unable to know exactly who reads any specific post (Viégas, 2005).

While the etiology of the problem for participants is now relatively clear, understanding the empirical problem of this paper – that of the origin of unintended disclosures and their avoidance – requires a conceptual apparatus that exposes ongoing adjustments. Online interactants must communicate without information on others’ emotions, behavior, or the focus of their attention. Such interactional conditions, then, raise a question: if the social media user’s significant others are a diverse group, and paralinguistic cues such as eye contact are unavailable to identify which members of their audience they are orienting a particular message, how do we know the significant others they are addressing when they say things they later regret? To answer this question it seems that we need concepts that allow us to analyze how people come to recognize different sets of audiences, and how awareness of these obscured others and unexpected changes in their participation influence the dynamics of interaction and resulting disclosures.

Sociologists of law, culture, and finance recently have begun to work with theories developed in the field of linguistics, a field which we argue also offers the conceptual apparatus for studying privacy and disclosure. Sociologists have looked to language to help explain how the formation of meaning and identity can be extracted from speech in specific social contexts. This is not a new approach; sociolinguists and sociologists have long shown that the relational structure of social action can be read from people’s use of language (Labov 1966, 1973; White [1992] 2008). Goffman (1983) was one of many who observed the value of studying language
for understanding the terms of mutual comprehension, arguing that mutual understanding required knowledge of presuppositions. However, he also argued that sociologists’ attempts to study the crucial role of form and prosody of presupposing utterances lag behind those of linguists. More than 30 years after his critique, important advances have been made among scholars of culture with, for example, Ng’s (2009) compelling account of how lawyers’ shifts between languages altered the daily work of the legal system in Hong Kong, and Godart and White’s (2010) demonstration of how meanings are created in stories (see also Kirchner and Mohr 2010). However, because we have only begun to study online venues, ones in which much contemporary interaction occurs, the work of clearly connecting sociological and sociolinguistic work remains unfinished.

**How a shared indexical ground is signaled using deictics**

To continue developing this work on interaction, we argue that the problem of decoding how bloggers interact with obscured others can be confronted with several concepts developed by linguists. In order to make sense of communication when multiple individuals lack cues of co-presence, we work predominantly with the analytic tools of indexical ground and deictics. Deictics are words and phrases whose denotational understanding requires contextual information (Hanks, 1992) and they matter because they belong to a shared meaning space. In a context where the identity and number of observers may be hard for the blogger to discern, analyzing deictics provides validated data that allows us to identify writers’ intended audiences in ways that parallel others’ approaches in using linguistic tools for content analysis (e.g., Chen, 2004).
People interacting can comprehend the meaning of deictics due to their shared indexical ground. The indexical ground is the presumption of shared knowledge in an interaction and it allows researchers to see what is taken for granted among interactants (Hanks, 1992). In order for two people to understand each other while exchanging text, either they need to have a ground that has already been established between them, use signs, or build a new indexical ground (Hanks, 1992: 44). In practice, this indexical ground constitutes both the relationship between the interacting parties and how these individuals understand the object of reference (the referent). For the first of these components, the key question is the degree to which participants have access to one another through sight or prior knowledge. For the second, the referent—whether a thing, a person, a time, or a place—may be a matter of common knowledge or, alternatively, something with which one party is significantly more familiar than the other. Most notably, the indexical ground itself is constituted and deployed by participants in a dynamic fashion through their ongoing interaction with each other. Thus, the indexical ground both shapes interaction, and is shaped by those very same interactive processes that it helps to constitute (Hanks, 1992: 44).

When participants interact, they use deictics to communicate elements of their indexical ground without stating every piece of information necessary for comprehension. The semantic meaning of deictics is fixed, but the denotational meaning of deictics is contingent on context. They reflect the standpoint of their user and may include, for example, pronouns (“he” or “she”) and demonstratives (“this,” “that,” or

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5 This process of alignment in language parallels implicit processes of coparticipation in interaction described by sociologists in more general terms (Berger and Luckmann, 1966; Garfinkel, 1967).
Deictics represent points in time, space, and the speaking event between interlocutors, and reflect the standpoint of the user. Deictics can signal anything, from shared past experiences and acquaintances to the time of day. Because they are used to attempt to propose some indexical ground or direct the interaction that follows, speakers will use deictics to initiate a new topic or draw their addressees’ attention to something new. Since deictics serve to point out or specify, they are functionally unified by their relational structure, in terms of both the relation between the interacting parties and the relation between the parties and the object of reference. For example, the expression “over there” indexes the speaker’s current location as an indexical ground from which to reference the location of the other person. Similarly, when the interactants are not physically visible to each other, expressions like “come here” or “talk to her” may not be understood because of the difficulty in defining points of reference. In the absence of a common indexical ground, non-deictic lexical description becomes necessary.

Relationships that are encoded in deictic usage make up an implicit playing field in which interaction takes place. Accordingly, understanding what information is signaled by deictics requires shared knowledge of the context in which the language is used (White, [1992] 2008: xx); see also Firth and Wagner, 1997; Gumperz, 1999; Goodwin, 2000; Gee, 2007). Participants dynamically represent and reconstitute the indexical ground as they move through space, shift topics, exchange information, and coordinate their respective orientations (Duranti and Goodwin, 1992). For example, pronouns like “I,” “he,” and “she” signal different relationships in different contexts. Demonstratives like “this,”
“that,” “here,” and “there” refer to different locations or relationships in which the physical positioning of the interactants is different.

Since the use of deictics is so contingent on venue, online participants may engage in different uses of deictics while writing to different groups within their audiences. Deictics are the clearest linguistic indicators of the transformations during interaction because the relationship features associated with the deictics remain relatively constant. For example, if the blogger shifts his deictics from “my ex-girlfriend” to “she,” we know that he has also shifted what he can assume his audience to know about his recent history of intimate relationships. Consequently, that assumption would change the way he frames his utterances, and also preface other, and possibly more revealing, types of disclosures. Even if denied online the paralinguistic cues available in face-to-face interaction, we can determine whether this content is linked to specific audiences and venues by examining how interactants change the deictics they use. Furthermore, we can understand missed cues; bloggers’ deployment of those deictics could be easily misunderstood without a shared definition of the indexical ground. Therefore, analyzing deictics can offer a way to unpack how blogging interactions are understood in key moments of disclosure.

**Data and methods**

To address the problem of recognizing audiences in online interaction, we employed multiple modes of data analysis. First, we conducted two waves of in-depth interviews with 14 university students, ages 18-27, whose blogging careers ranged from six months to five years. We focus here on college student bloggers who write about the quotidian
details of their lives, creating what has been termed a “personal journal” blog. Although many blogs are devoted to political punditry, news commentary, fan culture, and academic discussion, 70% of all blogs (Herring, Scheidt and Wright, 2004) are of the personal journal variety, dealing with the bloggers’ personal experiences and reflections.

Convenience sampling was used to select respondents (they responded to flyers on campus). We ensured representation of students that were international and from the US, from both genders, and from multiple racial groups. At the time of the first interview, the bloggers were students at a large public university in the Midwestern United States; the second interviews were held five years later with the eight interviewees who remained in the area. Respondents were asked in the interviews to discuss specific statements written on their blogs and indicate how they thought about these posts as they were composing them. Initial interviews were open ended, but all examined how the individuals began blogging, how their blogging habits had changed over time, when they felt they had violated their own privacy, and what influenced them to continue. Follow-up interviews focused on the catalysts reducing or increasing respondents’ blogging frequency or, if relevant, the factors leading respondents to cease blogging altogether. Because they are especially revealing of presuppositions underpinning routine interactions, we focused on conflicts such as when misunderstandings or unpleasant encounters (Emerson, 2015). A lengthy temporal period such as that encompassed by our data offers several advantages for general analysis of the relationship between bloggers’ perceptions of their audiences and the type of information disclosed, such as to observe how their perceptions of their audiences evolve over time, and how their strategies and disclosures change accordingly.
Second, we downloaded transcripts of participants’ blogs spanning the duration of their blogging careers and interpreted words and phrases in the context of the bloggers’ history of interaction with their audiences. We examined how utterances changed as new groups within these audiences made themselves present to the writers. We based our arguments by observing the bloggers’ posting habits that we discussed with interviewees. The posts and comments we presented reflect typical events for the bloggers we studied. We also present online passages that are especially revealing of the concerns about misunderstanding and overdisclosure expressed by multiple bloggers during interviews.⁶

Although we draw from a relatively small number of individuals, we analyzed each case in depth to learn the details of processes unknown before the start of the study, such as how the bloggers interacted with their readers and how each blogger’s interaction changed over time. Therefore, the 14 bloggers we studied should not be considered members of a sample, but rather as multiple cases (Small, 2009).⁷ Furthermore, given that we interviewed them twice across five years, these cases can reveal a learning process through which people may cultivate discretion when posting online through sequences of encounters.

How awareness of audiences shifts online disclosures

To understand the formation of a blog post, then, we examined which audience is being implicitly addressed in an utterance and its repairs. Below we demonstrate that bloggers’ online utterances differ according to their perception of their imagined and

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⁶ Mische (2008) uses a similar approach of presenting multiple and complementary forms of data.
⁷ See also the approach of Daipha (2010).
regular interactants. We identify three types of audiences toward which the bloggers’
posts are oriented: an uncertain audience, the chorus (a group of regular respondents), and
influential outsiders. Different bloggers will not necessarily encounter all of these groups
to the same extent, but those we studied all engaged with each type at one point in their
blogging careers. In the following sections we will describe and interpret how bloggers
perceive and respond to their audiences.

Orienting Towards an Uncertain Audience

Bloggers usually begin with a vague awareness of the public nature of their
utterances. They have the sense there might be occasional strangers who visit their site,
but do not think of their audiences in terms of specific individuals or groups in their lives.
In this first stage, bloggers frequently think of their blogs as something they are “trying
out.” Although most blog sites require users to register before they are permitted to
comment, the blogs are usually readable by a much wider audience.

Bloggers usually begin by reflecting on their online image. Early posts frequently
involve such self-conscious commentary.

Finally, the moment I've been waiting for: my own page. Too bad I can't enjoy it
much, I have so many other things to do. It's very exciting. I think I'm used to the
traditional method of writing on paper...the computer screen intimidates me. We
just look at each other, waiting to see who goes first. But then again, looking at

8 These sequences are marked by events rather than units of time (see also Abbott, 2001).
something I wrote makes me seem special. Perhaps that was the purpose of this, you know? Sometimes that's why I don't want my work/writings to become public because I'm scared of what people will think. Then again, no one knows this site but me. See, how I can go on? And, the good thing is no one really cares...wait...so what is the purpose of this whole online journal when only you can read it, right? I guess I have to be more sensible of what I write, then... Very mind-boggling.

This blogger, Gina, is warily confident about the anonymity of her site. She considers that other people will read it but is not overly concerned about their reactions. She is apprehensive about moving her writing online, but not so much as to prevent future posting. Her uncertainty about the viewing audience is clearly revealed by the fact that her post contains no deictics that would refer to specific individuals in the audiences, such as “she” or “you.” Further, she does not change the frame of reference in her use of deictics, having spoken solely to the “you” of an imaginary general audience.

The information revealed at this stage is rarely personal or sensitive. Indeed, bloggers know that they are on the web and that when posting on their blogs they are not writing a private diary. In the first round of interviews, the respondents were asked to compare paper journals and blogs; all of them recognized the difference. As Isabelle put it: “Blogs are for an audience.” Previous research also has identified that bloggers do not consider their blogs to be diaries. Instead, blogging is seen as a social activity (Herring et al., 2004; Nardi et al., 2004).

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9 All names are pseudonyms.
All the initial posts of our respondents omitted sensitive information, and audiences were not assumed to be friends. A post by Kimberly helps illustrate this:

**Good Morning,**

*(FYI, it's 8:55pm)* I always say good morning in greeting, no matter what time it is, not really sure why, it's just something that I do. It's really confusing some people here at college, especially those on the diving team who didn't know me from high school. They'll get used to it. Sitting alone in my dorm. Just got done playing a round of 007 and Mario Kart with Nathan in Seth and Mike's room across the hall. S and M (ha.) were playing online poker, par usual. They deserve the downtime after they and my roommate (all crazy architecture majors) were up late studying for a midterm that they had today. Annette is over at TBH right now chilling with Sonia's. I think that they are watching a movie; I was invited but I declined. I think I am going up to take part in at least some of a movie marathon with Mike and Caitlin in C's dorm. Theme: Kevin Smith, first movie.... Mallrats! A film I've never seen, which is a travesty in and of itself.

We see that Kimberly did not disclose sensitive information in this initial post. Rather, she was aware there could be strangers in her audiences. Accordingly, with her deictics she signaled an interest in introducing her readers to her peers, using details indicating the friends she mentioned lived “across the hall.” But even though the blogger and their uncertain audiences have a similar set of understandings, the bloggers did not share with
their readers the specific temporal and physical elements of the interactional venue.

Because bloggers are uncertain about their audiences at this point, it is relatively difficult for them to successfully use deictics whose interpretation requires an indexical ground.

Instead, bloggers use deictics that refer only to their own speech situation. Moreover, when they have to use deictics to single out particular elements within the context, they add non-deictic lexical descriptions to specify referents. In the above example, by writing “my roommate (all crazy architecture majors)” in lieu of naming a specific person, Kimberly could allow readers, as outsiders, to identify the relationship between that person and her, and thus better understand the utterance. Without receiving responses, then, bloggers are only minimally conscious of their audiences, and only have the vaguest concern about the impressions they are making online (see also Oolo and Siibak, 2013).

**Orienting toward the Chorus**

Bloggers’ later changes in their uses of deictics signal that in their next stage of interaction – that is, when they develop a “chorus” – they begin to more carefully account for their audiences. Revelations from both bloggers and their chorus then become organized by the rules of reciprocity and their corresponding processes of control. Two forms of reciprocity — action and content reciprocity — emerge, which draw bloggers into a situation where they feel obligated to reveal information they might not reveal otherwise.10

Like the chorus in a Greek tragedy that describes and comments upon the main

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10 The concepts of action and content reciprocity are directly derived from the use of reciprocity in social exchange theory (Gouldner, 1960; Blau, 1964; Molm, 2003).
action of a play on stage, a set of regular respondents provide ongoing commentary to bloggers. For our respondents, these were predominantly close friends with whom the bloggers frequently interacted in face-to-face contexts, though occasionally we found the chorus included people the blogger knew exclusively through online interactions.

Like the Greek chorus, the voice of the modern blogging chorus is united and centered around a focal actor. Because the focus of the chorus’ comments is person-centered, not issue-centered, chorus members rarely disagree. Therefore, the responses written by the chorus were usually phrased in positive and supporting terms because they are usually interpreted as a reflection of their relationship with the bloggers. The bloggers feel that leaving negative comments on another person's blog is, as Brian put it, “not cool” (see also Herring et al., 2004; Nardi et al., 2004; Ali-Hasan and Adamic, 2007). This encouragement sustains the blogger’s momentum. Bloggers claimed to often be preoccupied with receiving chorus comments; 50% of our interviewees described a tendency to repeatedly revisit their blogs between posts to see whether their chorus had responded. As Isabel noted, “Getting more comments would encourage me to write more. I also leave comments on other peoples’ blogs when they comment on mine [and] wait for comments to appear.”

The exchange of comments on each other’s blogs usually proceeds according to what we call action reciprocity. Once a member of the chorus posts an initial comment, bloggers enter a new relationship that obligates them to exchange comments with that person. Comments are a sort of gift that, as Isabel suggested, is expected to soon be repaid by a comment on the giver’s blog, particularly to the chorus members who
commented the most frequently. From this logic of exchange, another form of reciprocity emerges: content reciprocity, which occurs when bloggers and their choruses begin to reveal sensitive information at a similar rate of exchange and consequentially, the content begins to be mediated by the discussions with the chorus. For example, interactants begin to disclose sensitive subjects such as details about their personal health. Consider the events that ensued after Mary posted the following on her blog:

God, my darlings. Has it been so long since I last updated you on this shithole of a life? It's only gotten worse. I started speech therapy and was shown photos of my esophagus that prove I do have acid reflux, and was ordered into the acid reflux lifestyle. Which is total shit. Think of everything you eat, and then get rid of all of it, because it probably causes acid reflux. Citrus is bad, chocolate is bad, tomatoes are evil, garlic, spice, SALAD DRESSING, on and on. You'd think we'd all be celebrating having a dedicated designated driver, but instead it's like a funeral for the fun that I apparently will never have again.

Immediately after Mary’s post, Rita, engaging in what we’ve called content reciprocity, made a comment on Mary’s blog in reference to her own blog post, that “mine is whinier,” which successfully tempted Mary into visiting Rita’s blog. Rita then wrote a revealing message on her own blog that described in detail her own health problems, namely ones involving surgical complications:
I sure miss writing here. The last time I updated I was looking forward to reconnection surgery and getting my old life back. Well, what happened was quite a bit different. I got the surgery May 27, and it failed almost immediately. One month later I was taken to the hospital in an ambulance, in too much pain to move. I had had a bowel perforation. It wasn't a surgical mistake, it was that my large intestine, or what was left of it, became diseased immediately after reconnection and finally perforated, releasing free air and bacteria into my abdominal cavity. I underwent emergency surgery for this life-threatening condition that kills as many as 30 percent of people who go through it, most of them through sepsis on their way to the hospital. I got lucky.

It's been hard to see it that way, though. I have the ostomy and the bag permanently now, and that's done wonders for my self-image LET ME TELL YOU. Yeah, right. I feel like a deformity. It's hard to go out and interact with the world.

During her blogging career, Rita had not previously discussed such personal matters. This episode suggests that Rita’s usual discretion was countered by the pressure of reciprocity, which ultimately led her to disclose information on personal health problems.11

By utilizing action and content reciprocity, the bloggers and chorus establish a dyadic genre of interaction that overcomes the problems of asynchronicity and invisibility.

11 Danescu-Niculescu-Mizil et al. (2013) also show how content convergence (in terms of language use and adaptation) could occur at least in the initial stages of becoming a member of an online community.
Therefore, the type of social interaction that usually requires temporal co-presence can actually be reproduced by this reciprocal online relationship.

Both action and content reciprocity build an indexical ground for bloggers and their choruses. Therefore, the process of reciprocity when people blog is similar to the use of referential tactics in email interaction, in which certain individuals or past messages are called upon to assign meaning to a particular utterance (Menchik and Tian, 2008). This shared understanding makes it possible for bloggers and their audiences to establish relatively symmetric exchange relationships, which then allows both parties to comprehend the deictics used. When oriented toward their choruses, bloggers begin to use deictics in forms similar to Mary’s use of “my darlings.” They write as if they are speaking to an audience they know personally, and because of the indexical ground established and shared in past interactions on the blog site, the audience understands the denotations of the deictics Mary uses.

Furthermore, the reciprocal relationship established between bloggers and a type of their audiences does not affect their choices of deictics nor their mutual understanding of each other’s utterances. Consequently, bloggers and their choruses communicate in spite of the fact that they are not immediately visible to each other. Consider Brian’s utterance toward his chorus:

im mad at her. or upset. im not sure which one, or maybe both. i hate how she affects me so much, and i hate how i dont want to lose her. i feel like im always upset with her or shes upset with me, and that sucks. whats the point if we're just going to be
bickering all the time? i cant wait to get out [of] here. i get to start over in the fall and
i cannot wait. and fuck it, im not mad at her or upset, im just frustrated. she has so
much fucking potential and she doesnt realize it, and is just dragging herself down.
whatever though, theres nothing i can do about it, but i'll be here to help if necessary.
well im gonna go for a walk because i need some air. later.

In this post, Brian used the deictic “she” throughout. There is no way for intermittent
readers to identify who “she” is. But having already blogged about his relationship for
several months, Brian had built an indexical ground with chorus members, leading to his
comfort in using a deictic that could be understood only by these readers.

A few days later, Brian wrote another post about the same person, the “she” who had
been bothering him.

so tonight i thought was going well until i said goodbye to her and she was all fuckin
mad about something. i dont even know what. i cant even think of one thing i could
have possibly done to make her mad this time. its getting ridiculous, i think im done
for a while, i dont need this in my life right now. she can have her own life and her
own boyfriend, but i dont want to be involved with it anymore.

A chorus member responded,

i duno, im sure you and lynda can think of something
In this post, Brian again used the pronouns “she” and “her.” This taken-for-granted information reflects the indexical ground shared by the blogger and his chorus, shared knowledge allows them to freely use deictics. Yet, a commenter used a deictic that a non-chorus reader would not understand, indicating that at least one member of his chorus understood his reference. A regular reader would know that Lynda is Brian’s new girlfriend, and that the “she” is his old girlfriend. Because reciprocity provides expectations and an indexical ground, the interaction between Brian and his chorus members moved what might have otherwise been an asymmetric interaction into a symmetric one.

The reciprocity between the blogger and the chorus member is best illustrated by the interdiscursivity of their dialogue. The particular posts about his ex-girlfriend can be understood only by referring to a chain of past posts. Since online interactions are easily recorded, interdiscursive details are more easily accessed and less likely to be forgotten. For example, in Brian’s post, he said “i can’t even think of one thing i could have possibly done to make her mad this time.” For personal deictics (“I”, “her”) or demonstrative deictics (“this”) to be understood, the “referent” of the communicative event, and the persons inhabiting the indexically presupposed roles of “Sender” and “Receiver,” must be placed in their spatiotemporal chronotope (see Bakhtin, 1981). That is, when bloggers are using these deictics, they are trying to invoke some past interactions that would allow the chorus member to properly understand what they are referring to. Considered this way, we can see the importance of content and action reciprocity in the exchange’s
interdiscursive structure.

Because bloggers cannot see their audiences, then, they interact only with the few persons whose comments they can read, although they are actually talking to a much bigger audience. As we see in the example above, Brian addressed his chorus as if it comprised only his close friends and ignored the random strangers who might have encountered his blog. In the post he appeared unconcerned by the misinterpretation that might result from strangers’ observations. The way he and other bloggers use deictics shows that even though they are on the web, they are talking to a specific audience, as if involved in a dyadic interaction with friends in a private venue. They do not acknowledge their exchanges as public. The chorus may represent a small percentage of a blogger’s total readership, yet because of the power of the action and content reciprocity provided by the chorus, bloggers become focused on that particular group. Indiscreet disclosures, such as revelations of sensitive personal information, follow because the bloggers’ focus is locked upon this small subset of the entire population who reads the posts.

What’s most interesting is that the bloggers we studied acted as if the chorus comprised their entire audiences. This is an example of a cognitive processing bias or selective attention that causes people to seek out and register those details that are consistent with their expectations, while overlooking other details that are equally perceptible and “real” (Douglas, [1971] 1978: 298-99; Ainsworth and Greenberg, 2006). Bloggers selectively attend to their contexts not out of choice, but because this interactional venue makes them unable to realize that other people besides their chorus are watching. The resulting dyadic conversation leads them to ignore the public nature of
their online utterances. Similar phenomena have been theorized by others as constitutive of the online experience. For example, scholars find that when facing context collapse on social media, users end up creating an “ideal audience” that is composed mostly of peers and close friends (Oolo and Siibak, 2013), since this is the group with which they interact most frequently (Stern, 2008; boyd, 2008). Marwick and boyd (2011) also find that many Twitter users may understand that their potential audience is limitless, but they act as if they were only communicating with a limited group of “ideal audience” (p. 115). As a result, they claim: “I tweet passionately, I tweet honestly.”

This analysis of the exchanges between bloggers and their chorus members is particularly revealing of the more general relationship between the bloggers’ interactional context and the selective attention paid to their audiences. Because an indexical ground is necessary when using certain deictics, we know that when bloggers are using these features of language they are talking to people with whom they feel they share points of reference.

Orienting toward Influential Outsiders

The patterns with which a bloggers use deictics with their chorus reveal that they consider themselves to be talking to intimates, and thus they unexpectedly disclose private information that they might regret later. The bloggers we studied indicated that encountering an influential outsider was the way they realized they had, indeed, violated their own privacy. Outside of the prolific contributions of “regulars” to any blogs, there are usually many – a majority, likely – who silently observe. Over time, bloggers
commonly receive unexpected comments from such observers. We call these readers who inhabit bloggers’ other social circles influential outsiders. They are “influential” because they occupy important positions in the blogger’s social network, but they are also “outsiders” in the sense that they have not engaged in action or content reciprocity. The influential outsiders could include such people as family members or colleagues. When influential outsiders comment, bloggers may discover, to their chagrin, that their posts are visible to viewers beyond the chorus and that they have presented themselves in a way they feel is unflattering in the eyes of influential outsiders. Ten of the 14 bloggers we studied mentioned that an encounter with a member of this group had made them uncomfortable.

Several participants indicated that the most impactful effects of influential outsiders were face-to-face encounters—when someone mentioned their online blogs in offline situations. For instance, during the second wave of interviews, Isabel expressed surprise that her online writings would be introduced to other circles and that some people mentioned her online disclosures to her offline.

I knew [the blog] was public and thus that anyone can read it, but was still somewhat surprised that other people knew. I realized that you don’t have to tell someone in person that something happened, that they can read about it. When they mentioned it, I’m like, “Oh, you read that?”

\[\text{12}\] Other scholars have made similar observations that social media users tend to be more concerned with peers, parents, teachers and employers, i.e. those who they know or hold immediate power over them, rather than strangers (Livingstone, 2008; boyd & Hargittai, 2010; Davis & James, 2012).
Another interviewee, Mira, also indicated that she was repeatedly surprised and embarrassed when people she only occasionally encountered mentioned her blog. Only then did she realize that her blog’s audience was more diverse than she previously thought.

As discussed above, understanding a textual utterance requires either an indexical ground that has already been established between sign-users or the use of deictics to build a new ground. But neither of these can be achieved between a blogger and influential outsiders. Influential outsiders may share some common background knowledge with the blogger, as parents do with their child. But more often than not, misinterpretation occurs because they lack the indexical ground required to understand the specific utterance. Similar to as we saw with the chorus, in the online context the audiences did not share a visual or cotemporal relationship with the blogger. Under these asymmetric circumstances, all interactants, be they influential outsiders or chorus members, would fail to share a common experiential field. Therefore, interactants would misunderstand both the meaning and the intended interaction partners of bloggers’ posts such that even though bloggers use deictics to address the chorus, influential outsiders may think they are also included in the conversations.

When bloggers see influential outsiders unexpectedly enter their interactions, bloggers begin to regret features of their exchanges with chorus members. For example, after a long sequence of exchanges with a small number of chorus members, Mary bluntly disclosed some personal health information:
Apparently Dr. Fussy misdiagnosed me with nodules; then again, I was gagging and mentally threatening his manhood while he was peering at my vocal cords, so we can't hold the man too responsible. These guys had to have quite a debate over the picture they eventually took after attempting to shove not one, BUT TWO, cameras down my throat before I suggested we go through the nose. Never would I have suggested this in a million years, but the size of the thing they were trying to push past my gag reflex, honestly. Not dick sized, but at least dicks aren't, you know, metal. And they don't hold out your tongue with cheesecloth while trying to angle themselves correctly to get into deep throat position. And the nose scope is actually quite small. I have GOT to abandon this metaphor...

Anyway. Depressing. Don't want surgery. Want to be better. Waaahhhhh. Time to drown my sorrows in an economy sized bottle of vodka. :( 

Although she intended the post to be an informal exchange between Mary and her chorus members, Mary later received a comment from an outsider that had not participated previously:

Since you've mentioned porn in the past, I think your medical angle mentioned above could make its way into a series of films. There are enough fetishes out there that make me scratch my head, so somewhere, there's a public for men and women who enjoy medical instruments and cheesecloth used to ready the mouth for a swollen
cock.

Immediately, Mary realized that the post was read by someone she had not been aware of previously. This surprising encounter makes her marginally regret the previous disclosure. Mary responded to this comment:

I want to be shocked that a nice young man like yourself would throw out words like “swollen cock” on my delicate little blog, and then I remember that I used the blink text to detail my falling asleep and snoring during a one night stand. I made this happen. I'm so un-ashamed.

In the first post, as Mary was talking to her chorus in an intimate way, she did not use deictics to indicate she intended to speak to anyone in particular. Therefore, the person who happened upon her previous posts did not think of her past conversation with her chorus as private, and participated. He took Mary’s use of graphic language as reason for him to respond with graphic language, and she was surprised to be confronted in these terms. The influential outsider could be said to be eavesdropping on a private exchange, a form that is more likely to be normatively deviant. However, since Mary didn’t use any deictic cues that set influential outsiders apart from the chorus (with which she familiar), his comments made Mary feel vulnerable. When responding to the influential outsider, Mary made it clear to which audience she was addressing by changing the way she used deictics. Mary used “a nice young man like you” to individuate, or single out, the targeted
audiences of that message. But at the same time, she also revealed more background information that she thought might have led to the misunderstanding. In doing so, she was trying to explain to other potential observers what might have happened.

Bloggers’ exposure to comments marks an important change in how they understand their audiences. It is not until encounters like the one between Mary and her influential outsider happens that bloggers consciously realize that the dyadic exchange between them and their chorus was experienced as a kind of broadcast by the rest of their audiences (see also Davis and Jurgenson 2014). This breach, then, is important because it makes the bloggers realize that the interaction is $n$-adic rather than a dyadic interaction with chorus members. We have called this form of interaction “$n$-adic” because it is impossible to know the potential number of participants in this interactional venue, and it is also the case that anyone may enter the conversation even long after the disclosure has been posted.

Indeed, after encountering the breaches from influential outsiders, when bloggers respond to comments, they are no longer reciprocally responding to the person who raised the question. Rather, the reason they respond is precisely because this interaction has also been broadcasted to people who then have to align themselves in one way with others. Although it is common for participants in an interaction to rebuild context or shift footing when attending to their current audience (e.g. Tetreault, 2009), bloggers face the challenge of aligning themselves either with the chorus or influential outsiders – audiences which are often undetectable. The hybridity of the communication, or, as described in other studies of interaction on social media, the collision of social contexts
into one (Marwick and boyd, 2011; Vitak, 2012), makes it impossible to build a shared indexical ground for all parties that are involved in the interaction. Even if the participants share this broader social culture, in any particular interactional moments they still need to specify the meaning of their words.

_Adjustments to the Content of the Posts and the Technical Interface_

In the second wave of interviews, bloggers expressed that the push and pull they felt between the reciprocity produced by the chorus and their uneasiness with influential outsiders made them uncertain about the overall prudence of blogging. Given the \( n \)-adic nature of the interaction, they wondered whether materials published on their sites would bring serious negative consequences.

One way in which bloggers manage these problems of audience and online presence is by changing their posting behavior or adjusting their blog’s technical settings. Once they have made a disclosure they regret, bloggers actively seek to control their self-presentation online by making technical adjustments to their blogs, specifically: controlling access, deleting past posts, disabling comments, or decreasing the frequency with which they post. With these adjustments the bloggers attempt to reduce the probability they will again violate their privacy.

First, bloggers may attempt to use the technical specifications of their blogs to control which audience has access to certain posts, trying to replace an interaction’s \( n \)-adic properties with ones characterizing more conventional dyadic or triadic interaction. By maintaining separate blogs for each different group in their life (e.g., family, school,
work), both Mira and Kama attempted to separate their readership. Kama rationalized this division by saying that “different groups know different things about me.” She realized that interacting with different groups demanded multiple strategies, so she tried to manage the collapsed context by trying to keep the different situations or role identities separate. However, even though she had partitioned her social network into two groups, within these two groups there were still subgroups of people who knew different things about her. Consequently, she still had difficulty predicting the information she would be comfortable expressing to each group.

Kama’s experience suggests that difficulties in disclosure emerge not from the amount of information the blogger shares with those social groups, but from features of the indexical ground, elements that emerge from shared physical and temporal aspects of the immediate interaction context. Bloggers will confront these difficulties by using blog technology to expose their writings solely to a limited, authorized audience (by changing the privacy setting) (see also Debatin et al., 2009, and Vitak, 2012), or, alternatively, will continue using the blog in “private” mode, disallowing readers altogether. By employing these strategies, the bloggers overcome the problem of unexpected audiences by blocking the access of influential outsiders.

Second, bloggers may delete past posts they think might be inappropriate to the new audience they have detected. They usually delete the posts that they consider the most private, seeking to shape their blogs’ content for a more public audience, what Hogan (2010) has called the “lowest common denominator strategy.” In this way, they indicate their acceptance that the interaction is n-adic and that they are interested in
accommodating accordingly. Recall the exchange between Mary and Rita over health problems. Approximately 20 days later, Rita’s self-disclosing response had been pruned from her blog. She had overcome the selective attention paid to chorus members and had begun to orient online disclosures to broader audiences. Similarly, in her second interview Michelle said that she had deleted everything on her blog and closed the site because her current boyfriend was upset about past writings about her relationship with her ex-boyfriend. Half of the bloggers we interviewed had deleted at least one post after realizing they had presented themselves to an audience in a way that made them uncomfortable.

Third, bloggers may disable others’ ability to comment, a calibration performed by approximately one-third of our respondents. By disallowing comments, they can prevent other people, especially chorus members, from revealing more information about them. In doing this, they are trying to deal with the hybridity problem by making the interaction exclusively n-adic, eliminating challenges endemic to managing turn-taking dynamics with chorus members.

Fourth, over time, bloggers tend to post less frequently, reflecting bloggers’ withdrawal from the selective attention initially oriented to chorus members. Given that the main motivation of posting stems from the applause within the dyadic interaction with chorus members, it is understandable that over time bloggers becomes less likely to post after realizing the n-adic nature of this type of interaction.

Finally, even after this self-censorship, some bloggers will quit because they have come to realize that they cannot simultaneously talk to both their chorus and influential
outsiders – as it causes trouble to maintain dyadic and \( n \)-adic interaction at the same time. Three-quarters of those we re-interviewed drew attention to the centrality of influential outsiders in the events that led them to abandon their blogs. Many of our respondents turned to diaries after they abandoned their blogs. Indeed, 71\% of them wrote in a journal before, after, or during the period when they had a blog. These people had material that they were not prepared to reveal to their influential outsiders but felt they must express in print. Thus, when bloggers’ audiences are removed, online writing returns to its original, personal, form.

**Conclusion**

In analyzing interactions taking place on blog sites, we reinforce a crucial point in classic and recent sociological work on culture and privacy: that whether an utterance is considered private depends less on its content than on its observers.\(^{13}\) But our interest in understanding overdisclosure has allowed us to reveal how the online venue influences interactants’ awareness of different sets of audiences. This evolving awareness leads to a unique structure of \( n \)-adic interaction. When entrained in \( n \)-adic interaction, people widely disclose information they consider private, after which they take measures to disclose less and use technical elements to control exposure.

While people sometimes choose to discuss important matters with non-intimates (Small 2013), such discussions are sometimes not intended. By working with concepts of deictics and indexical ground, we show that the bloggers’ online disclosures are governed

\(^{13}\) See, for instance, Simmel, 1906; Schwartz, 1968; Zerubavel, 1979; Nippert-Eng, 2010; Gibson, 2014.
by two competing mechanisms: encouragement from a chorus and breaches from influential outsiders. Considering the puzzle of disclosure, then, we can see that bloggers’ perceptions of their audiences make online interaction possible, but those perceptions also make them violate their own privacy through inadvertent disclosures. In other words, bloggers reveal sensitive information online not because they do not care about privacy. Indeed, recent work on other forms of social media similarly demonstrates this deep concern for privacy (Marwell and boyd, 2014). Instead, at least temporarily, bloggers think they are being private. Specifically, shifts in their uses of deictics suggest that the nature of the blogging medium makes them fail to realize that they are having very private conversations in a very public venue. Bloggers ultimately manage the problem of visibility by maintaining a dyadic turn-taking interaction with a small section of their audiences, adjusting only when they realize the unique challenges of $n$-adic online interaction.  

In this paper, we show that the awareness of audiences is contingent on encounters that evolve over time, and driven by feedback loops in interaction. In this framework, disclosers primarily accommodate to their chorus members and think they are co-present with their chorus alone, as shown in their use of deictics. But the influential outsiders oversee the ongoing exchanges and think they are included in the conversation as well. Thus, what we see in $n$-adic interaction is that unexpected others think they are eligible to participate in the interaction, but this perception is not shared by the discloser. We know

\footnote{It is worth noting that the difference between “chorus” and “influential outsiders” might be most salient in the particular type of blogs we studied here. For other types of blogs, such as political blogs or blogs maintained by celebrities, the bloggers might be aware of the $n$-adic nature of their utterance early on.}
that any course of action demands presuppositions, but anonymity and asynchronicity challenge the individual’s attempts to anticipate responses. Because their presence is unexpected, in an $n$-adic interaction unexpected others such as influential outsiders ultimately have a major influence on how speakers shift their style of speech. After experiencing the challenges posed by the hybrid structure of blog interaction, bloggers made technical adjustments to try to reduce the future probability of violating their own privacy.

Our first contribution to scholarship on online interaction is in demonstrating the process through which gradual awareness of different sets of one’s audiences emerges, and the consequences for the social organization of different speech forms. In identifying the hybrid structure of $n$-adic interaction, we also advance scholarship on mediated communication by emphasizing how speakers’ uncertainties about their audiences shape the dynamics of interaction. For example, a speaker is unsure whom they should take into account because the potential number of participants and the time they enter or exit the interaction is uncertain. Such $n$-adic interactions are different from other staged conversations in terms of both the implicit bargain between participants and the explicit capacity of those not perceived by participants to intervene. We find, then, that the interaction between bloggers and commenters has a duplex structure, because it is both a staged dyadic dialogue in which bloggers have full knowledge that there’s an audience, and yet it also involves an $n$-adic participant structure. On the one hand, this exchange is a dyadic structure in that it sometimes does loop back so that the same person will make another comment. On the other hand, comments also have an $n$-adic participant structure.
In contrast to how interactions are organized in offline venues, such as classrooms characterized by dyadic instructor-student interactions among members of a class, the uncertain nature of audiences in $n$-adic interactions makes their dynamics considerably less predictable. Because of blogging’s hybrid combination of dyadic and $n$-adic interaction, it is hard for participants to know at any given time who they are interacting with, and thus project how members of these audiences will respond.

The second contribution is in showing how intersubjectivity can be achieved in an anonymous and asynchronic interaction venue. The content and action reciprocity established between the disclosers and chorus members allow them to establish a symmetrical relationship without the signals of mutual entrainment usually thought to be central to achieving intersubjectivity, that is, synchronization of attention, emotion and behavior (Campos-Castillo and Hitlin, 2013). Consequently, the reciprocal relationship the blogger and the chorus build makes it possible to overcome the asynchronicity problem in blog interaction, thus allowing the parties to maintain the interaction in spite of the delay in feedback.

The third contribution is to reveal a key feature of interdiscursivity of speech in $n$-adic interaction online. Interactants can point to a past exchange’s utterances with accuracy and certainty because it is so easily recorded. This semiotic act of “pointing-to” from “someplace” is a defining characteristic of communicational interdiscursivity (Silverstein, 2005; see also Kramer, 2011). Relevant interdiscursive features are especially evident when bloggers refer back to what they’ve said, or demand certain things that need to be fulfilled in the future. For instance, these interventions might
include questions such as “would you mind clarifying exactly what you said on the 27th of July,” or “are you free of the health problems you mentioned on your blog on September 3?” With these posts, bloggers are able to locate their interaction with a history of past interactions, and for readers, their texts expose sometimes highly elaborate interdiscursive structures of chaining. By looking at this venue’s interdiscursive features, it is possible to figure out the imagined interlocutors when the whole interaction is over. This unique form of interdiscursivity is different from interactions staged offline, where, among other differences, it is impossible to resume the intersubjective experience of past conversations. But in this online venue, an influential outsider might comment on a past post. It is also possible to use past posts as a reference to comment on current posts. Consequently, the number of “someplaces” to “point to” becomes limitless. In this way, \( n \)-adic interaction has its unique interdiscursive structure.

In conclusion, we have offered some early findings about a form of sociality in which others make people violate their own privacy as a consequence of the intertextual features of an anonymous and asynchronous space. Based on our analysis of \( n \)-adic interactions, it may be possible to use the conceptual vocabulary presented here to think about the social organization of interactions in other venues characterized by suppression and disclosure. Attention to language in further ethnographic research may offer other ways to advance our understanding of how distant others influence the actions we observe in the everyday time and place where ethnographic research occurs.

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